

California Regional Water Quality Control Board
North Coast Region

Order No. 98-24
I.D. No. 1B84006ODN

Requiring the City of Crescent City
To Cease and Desist from Discharging Waste Contrary to
Waste Discharge Requirements No. 94-60
NPDES No. CA0022756

Del Norte County

The Regional Water Quality Control Board, North Coast Region (hereinafter the Regional Water Board) finds that:

1. On June 23, 1994 the Regional Water Board adopted Order No. 94-60, National Pollutant Discharge Elimination System Permit (NPDES) No. CA0022756 for the City of Crescent City Municipal Wastewater Treatment Plant. Order No. 94-60 includes Effluent Limitations that must be met before treated wastewater from the treatment plant can be discharged to the Pacific Ocean.
2. Following a public hearing on February 27, 1997, the Regional Water Board adopted Cease and Desist Order No. 97-17 which documented violations of effluent limits contained in waste discharge requirements and directed the City of Crescent City to perform the following tasks by September 30, 1997:
 - “a. Determine the existing capacity of the wastewater treatment plant both in terms of hydraulic and organic loading and submit a report to the Regional Water Board. The report should compare the existing capacity with existing loads and evaluate the performance of each unit process. Additionally the report should include capacity needs for an extended planning period (e.g. 20 years) to be determined by the city and county.
 - b. Provide the Regional Water Board a plan of action and a time schedule for bringing the wastewater treatment plant into compliance with waste discharge requirements. This plan should include short-term changes that will bring the plant into immediate compliance with Order No. 94-60 and long-term actions that will assure compliance during the selected planning period.”
3. The required tasks were completed on schedule and a report was submitted to the Regional Water Board on time. The requirements of Cease and Desist Order No. 97-17 have been achieved by the city.
4. The conclusions, as excerpted from the report prepared by Montgomery Watson and SHN Consulting Engineers are:

- a. Plant Organic Capacity -- The treatment plant is organically overloaded. The plant is unable to consistently meet discharge requirements at BOD concentrations greater than about 275 mg/l, which occurs often during dry weather periods. The existing RBC treatment system cannot effectively remove the necessary organic waste to meet the 30 mg/l effluent discharge requirement. Organic mass loads vary significantly depending on the contributions from industrial users.
- b. Plant Hydraulic Capacity -- The treatment plant is hydraulically overloaded during wet weather periods, sometimes for as long as a month at a time. The average daily design wet weather flow of the plant was exceeded for 92 days during the 4-year study period. Wastewater is not being adequately treated at peak flows, and organic mass discharges often exceed the permit limits.
- c. Effluent Disposal System -- The existing influent pumps have an approximate 12 mgd maximum capacity. Flows sent through the plant when all influent pumps are in operation exceed the capacity of the effluent discharge system, and would over-top the concrete vessels in the plant unless the storm drain outfall is utilized to augment the ocean outfall.
- d. Plant Disinfection Capacity -- Treatment plant effluent is not always adequately disinfected. The existing chlorinating system is controlled manually and therefore does not adjust according to flow or demand fluctuations. The chlorinating system requires upgrade to reliably disinfect the plant effluent.
- e. Projected Flows -- Average dry season flows are projected to increase steadily through 2020 due to population and economic (business and industry) growth within the community. The average dry season flow is projected to grow from 1.73 mgd at present, to 2.64 mgd in 2020. Wet season flows are projected to increase steadily also, reaching an average of 3.58 mgd in 2020, from the current 2.67 mgd.
- f. Projected Organic Load -- Organic loading will also increase as a direct result of population and economic growth over the planning period. Influent Biochemical Oxygen Demand (BOD) is projected to increase from the current annual average of 3,834 pounds per day to 6,167 pounds in 2020. Total Suspended Solids (TSS) levels will grow from the 3,216 pounds per day at present to an average annual of 5,172 pounds per day in 2020.
- g. Industrial Loading -- Industrial users contribute significant amounts of TSS and BOD to the plant. Excluding the contributions from Castle Rock Seafoods and Rumiano Cheese, the average annual per capita organic contribution is 0.24 lb/day for both TSS and BOD. The equivalent per capita contribution with the industrial users included are 0.26 and 0.31

lb/day for TSS and BOD, respectively, corresponding to 8% and 30% of the average annual loading to the plant.”

5. The recommended actions, as excerpted from the report, are:
- a. Install Equipment for Flow-Paced Disinfection -- Reliable disinfection can only be accomplished with an automatic, flow-paced chlorinating system that includes a chlorine residual analyzer and effluent flow meter. Estimated cost = \$38,000.
 - b. Request Permit Modifications -- Two NPDES Permit modifications are needed to handle peak wet weather flows to the plant. 1) A relaxation of the permitted mass discharge limits is needed at flows in excess of the wet weather treatment capacity of the plant. The alternatives to this means of handling wet weather needs are costly and are not recommended until the long-range community alternatives are analyzed. 2) Acknowledgment of the need to route treated effluent to the storm drain system during peak flow periods to prevent over-topping of concrete treatment vessels in the plant. The alternative to this means of excess effluent discharge is a costly upgrade of the existing ocean outfall; again not recommended until long-range planning has been completed.

We recommend the NPDES Permit be modified to increase the limits on mass of BOD and TSS discharged from the plant at flows in excess of wet weather treatment capacity of the plant; the concentration limits of BOD and TSS would remain unchanged. The modified permit should also acknowledge the storm drain system as a safety valve for treated effluent discharge capacity, when needed to prevent flooding of the plant treatment processes. The modified permit would be in effect for the short term until permanent wastewater treatment and disposal facilities needed to serve the community in the future are in place. Estimated Permitting Cost = \$26,000.

- c. Pilot Testing -- Initiate the pilot testing program to identify the preferred BOD Reduction Project to be implemented at the treatment plant as soon as practically possible. The “Enhanced Primary Treatment” option is the most promising with respect to potential added capacity, and the pilot testing should begin with the coagulant chemicals analysis. The estimated project capital cost for the Enhanced Primary Treatment option is approximately \$29,000 and the O&M cost for chemical purchase and pumping energy is estimated at about \$35,000 per year.

Assuming a 50% removal of BOD in the enhanced primary process, the organic treatment capacity of the RBCs could be increased from 1.5 mgd to as much as 1.8 to 2.0 mgd. There is no foreseen increase in hydraulic capacity at the plant.

- d. Digesters -- Convert the operation of the digesters from the current “series” operation to “parallel” operation. The goal of the BOD reduction

project is increased removal of BOD in the form of solids that will ultimately be sent to the digesters. This anticipated added load will reduce retention time in the digesters, and could result in inadequate reduction of the plant sludge prior to drying and disposal. Parallel digester operation will reduce the risk of this potential lack of sludge processing. The estimated cost of the needed improvements is \$52,000.

- e. Funding -- Pursue funding for the community's wastewater management facilities planning process through the Bureau of Reclamation and other sources that may be available.
 - f. Facilities Planning -- Initiate the long-term facilities planning, permitting, and environmental review processes as soon as possible. The recommended improvements and modifications described in this report are short term only, and will not meet the future wastewater handling needs of the community.
 - g. City Actions -- Adopt the recommended Plan of Action and develop an associated Time Schedule for submittal to the Regional Water Quality Control Board (RWQCB) in accordance with Cease and Desist Order No. 97-17. Formally request the recommended permit modifications in a cover letter to the September 30th submittal to the RWQCB.
6. By letter dated September 30, 1997 the City of Crescent City transmitted the plant capacity study and included a time schedule for accomplishing the recommended actions. The schedule is:
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| a. | Request wet weather Permit modifications | Sept. 1997 |
| b. | Complete Chlorination Improvements | Nov. 1997 |
| c. | BOD reduction pilot testing | Oct. 1997 to April 1998 |
| d. | Select BOD reduction project | April 1998 |
| e. | Complete BOD reduction project | April to July 1998 |
| f. | Digester modifications complete | March 1998 |
| g. | Long term planning study | Oct. 1997 to Nov. 1998 |

Some of these projects are underway and scheduled for completion as proposed. Staff at this time does not intend to modify the NPDES Permit to change the mass emission rate as requested. It is recognized that violations will occur during high

wet weather flows. Item b., chlorination improvements, is complete with the exception of the installation of a weir which is on order and has not been delivered. Item c., pilot testing began on schedule and should be completed as proposed. A contract has been signed with a consulting engineering firm to design the modifications for item f. Completion is anticipated as proposed. The long-term planning effort is underway with funding provided by the Bureau of Reclamation. It is anticipated that the completion date will be met.

7. Section 13301 of the Porter Cologne Water Quality Control Act says in part:

In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order

Title 23, California Code of Regulations, § 2244(b) says that:

“Prohibitions or appropriate restrictions on additional discharges should be included in a cease and desist order if the further addition in volume, type, or concentration of waste entering the sewer system would cause an increase in violation of waste discharge requirements or increase the likelihood of violation of requirements.”

In this instance, with the sewage treatment plant both organically and hydraulically overloaded and in violation of waste discharge requirements, additional flow of wastes will cause more violations to occur.

The City Council of the City of Crescent City imposed a restriction on new connections prior to the adoption of Cease and Desist Order No. 97-17. Inclusion of a prohibition in this order will support the council's restriction.

8. The Regional Water Board recognizes that until the long-range planning effort is completed it will be necessary to discharge treated and disinfected wastewater through an overflow system and into a storm drain that discharges to Crescent City Harbor. Failure to use the overflow system during high flows would result in flooding of the treatment plant and serious damage to unit processes. The bypass is only necessary when plant flows exceed 3.6 million gallons per day.
9. Pursuant to Water Code Section 13389 and Title 14, California Code of Regulations, Section 15321, this is an enforcement action for threatened violations of Waste Discharge Requirements and for the protection of the environment and as such is exempt from the requirements of the California Environmental Quality Act.
10. On February 26, 1998, after due notice to the discharger and all other affected persons, the Regional Water Board conducted a public hearing and evidence was received regarding this Cease and Desist Order.

THEREFORE IT IS HEREBY ORDERED that Cease and Desist Order No. 97-17 is rescinded and pursuant to California Water Code Sections 13243, 13300 and 13301, the City of Crescent City shall cease discharging waste in violation of Waste Discharger Requirements Order No. 94-60 forthwith and comply with the following:

1. The recommended actions described in the “Final Report, Crescent City Wastewater Treatment Plant Evaluation”, dated September 1997 and prepared by

SHN Consulting Engineers and Montgomery Watson shall be completed according to the following time schedule:

<u>TASK</u>	<u>COMPLETION DATE</u>
a. Complete Chlorination Improvements	March 31, 1998
b. Complete BOD reduction pilot testing	June 30, 1998
c. Select BOD Reduction Project	June 30, 1998
d. Complete implementation of BOD Reduction Project	August 30, 1998
e. Complete digester Pump Modifications	June 31, 1998
f. Complete Long-term Planning Effort and Submit a Detailed Report and Time Schedule for Implementation of Needed Improvements to Bring the Wastewater Treatment Plant Into Reliable Long-term Compliance with Waste Discharge Requirements for the Selected Planning Period.	May 30, 1999
2. The bypass of treated and disinfected wastewater to Crescent City Harbor is prohibited at all times except when treatment plant flows exceed 3.6 million gallons per day.	
3. The addition of new flows of wastewater to the wastewater treatment plant from new residential, commercial, industrial, and/or governmental connections is prohibited until such time that it can be demonstrated to the satisfaction of the Regional Water Board that such connections will not result in additional violations of waste discharge requirements. [Title 23, California Code of Regulations, § 2244]	

Structures with building permits (or substitute final construction approval documents) already issued at the time of the public notice of the cease and desist hearing January 15, 1998 are excluded from this prohibition. [Title 23, California Code of Regulations, § 244.1(a)]

Those structures that do not require a “building permit” or are exempted from the permitting process shall be exempted from this prohibition if construction has commenced. [Title 23, California Code of Regulations, § 2244.1(a)]

The following are excluded from the prohibition:

1. Discharges from existing dwellings not connected to the sewer system which have methods of waste disposal which are causing more severe

water quality problems than those caused by the community sewer system. [Title 23, California Code of Regulations, § 2244.1(b)(1)]

2. Discharges which, by reason of special circumstances, if not allowed to connect to the community sewer system would result in extreme public hardship or a public health hazard. This is not intended to mean that economic loss to a community as a whole or to any public agency or private person within the community is by itself cause for not prohibiting additional connections because such loss is the rule rather than the exception and cannot outweigh the need to prevent an increase in water quality impairment which is the basic reason for the prohibition. [Title 23, California Code of Regulations, § 2244.1(b)(2)]

Certification

I, Lee A. Michlin,
Executive Officer, do
hereby certify that the
foregoing is a full, true,
and correct copy of an
Order adopted by the
California Regional Water
Quality Control Board,
North Coast Region, on
February 26, 1998.

Lee A. Michlin
Executive Officer